

Vol. III

No. 9

BULLETIN
OF THE
Chicago Academy of Sciences

FALL ANNOUNCEMENTS 1912



CHICAGO
Published by the Academy
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THE CHICAGO ACADEMY OF SCIENCES

FALL ANNOUNCEMENTS 1912

GENERAL STATEMENT

During the coming school year the Academy will continue the various lines of educational work which it has been carrying on in co-operation with the public and private schools of the city. The courses announced for teachers and children are given free of charge and as many applicants will be accommodated as is consistent with the space and nature of the work to be done. Preference must be given to those who apply early and present proper credentials. The delegate system, by which one pupil is appointed to represent his or her room and make a verbal or written report to those whom he represents, has proven to be a very satisfactory way of bringing the advantages of the Academy work to the largest possible number of children.

The Loan Collections, which have been in use in the schools for three years, will again be available for the fall and winter work. In addition to this museum material attention is called to the Lantern Slides and Picture Collections, which are loaned free of charge to the schools.

Two special Museum Loan Exhibits have now been prepared and will be delivered free of charge to schools during the coming season. So many requests were received for Exhibit No. 1, "Birds Wintering in the Chicago Region," that the schedule for that Exhibit is now made up for the first three months in the year. Requests may, however, be made for the loan of this Exhibit later in the school year.

Museum Loan Exhibit No. 2, "The Small Mammals Living Near Chicago," is ready for use in the schools and requests may be sent in at once for that Exhibit, which will be left at each school for a few days when the teachers may make appropriate use of it in their nature study work.

These Museum Loan Exhibits are arranged as habitat groups including a somewhat large number of the animals which might be found in such a habitat. Through the study of these exhibits the children and teachers may associate the animals with their proper field settings, and it is hoped that this study will encourage them to make greater use of the Academy Museum and of the Zoological Gardens in Lincoln Park.

While the educational value of the material in Lincoln Park has been appreciated by many of the teachers, a systematic series of excursions to the Park and to the Museum Building would prove to be of very great value to the young people. To encourage a more careful study along the lines of work at the Academy, both in the examination of museum material and of the plants and animals in the Park, the Academy has set aside a room and furnished it as a Children's Science Library and Free Reading Room. There is no doubt that the best time to arouse an interest in science is in childhood and that the interests then founded will continue throughout life and may lead to a great deal of pleasure and in many cases to exceedingly great values to the young people as they enter active industrial or professional work.

Several new exhibits have been placed in the Academy Building of which the teachers and pupils of the schools are invited to make full use in their work.

The Academy will be pleased at any time to receive suggestions as to the ways in which it may be of greater value to the schools or to the neighboring community. Communications should be addressed to the Secretary.

CHILDREN'S LIBRARY

The Children's Science Library and Reading Room, recently installed at the Academy, contains over five hundred selected books of science and nature study. The Reading Room is located on the first floor of the Academy Building and is open from 9:00 A. M. to 4:30 P. M. each week day.

An invitation to use this library is extended to all children. Individual guidance in the proper use of nature study books will be given by the Librarian.

NATURE STUDY COURSES

COURSE IX. A Laboratory Course for delegates from the seventh and eighth grade rooms. Preparation and Preservation of Plant Materials for School Study. Putting up and preparing leaves, fruit and other plant parts for winter work in the schools. Limited to thirty.

By Dr. H. S. Pepoon.

Six lessons beginning Wednesday, September 18, 4:00 P. M. and continuing on succeeding Wednesday afternoons.

COURSE X. A study of Some Common Farm Products, illustrated with lantern slides and specimens. For delegates from the fourth and fifth grades. Tuesdays at 4:00 P. M.

By Miss Mary Alma Hardman.

Lesson I.	Wheat Raising	-	-	-	-	Oct.	1.
Lesson II.	Corn Raising	-	-	-	-	Oct.	8.
Lesson III.	Cotton Growing	-	-	-	-	Oct.	15.
Lesson IV.	Hay Raising	-	-	-	-	Oct.	22.
Lesson V.	Rice Culture	-	-	-	-	Oct.	29.
Lesson VI.	Cattle Raising	-	-	-	-	Nov.	5.

COURSE XVI. How to Identify Natural History Specimens. Laboratory Course for delegates from the sixth grade. Six lessons in the use of the Library, Museum, and Park in the identification and study of natural history specimens; an attempt to teach the child the use of books and pictures in connection with his observations in the out-of-doors and in the museum. The course aims to stimulate and assist careful and accurate individual nature study observation. Limited to fourteen. Saturdays at 9:00 A. M.

By Miss Mary Alma Hardman.

Lesson I.	The Study of Flowers I	-	-	Sept.	28.
Lesson II.	The Study of Flowers II	-	-	Oct.	5.
Lesson III.	The Study of Trees	-	-	Oct.	12.
Lesson IV.	The Study of Birds	-	-	Oct.	19.
Lesson V.	The Study of Insects	-	-	Oct.	26.
Lesson VI.	The Study of Animals	-	-	Nov.	2.

COURSE XVII. Field and Laboratory Course for Teachers. The Flowers and Fruits of Autumn. Identification by field and laboratory study. Notes on sunflowers, golden-rods, asters, gentians, and many striking flowers and fruits native of the Chicago Area.

By Dr. H. S. Pepoon.

Six lessons, beginning Saturday, September 21, and continuing on succeeding Saturdays.

Those wishing to enroll in Courses IX, XVI, or XVII should send their names to the Academy before the opening of the course. Announcements will be sent to members of classes. Preference will be given to those enrolling earliest.

TEACHERS' COLLEGE-CREDIT COURSES

Arrangements have been made with University College of the University of Chicago for the following regular college courses to be offered at the Academy during 1912 and 1913:

ZOOLOGY 26:—Animal Behavior. An introduction to the study of animal ecology, reactions, and intelligence with particular reference to the Chicago Area. Lectures, demonstrations, and a study of Holmes' new book on the "Evolution of Animal Intelligence." Autumn Quarter, Thursdays, 4:00-6:00 P. M. with some optional excursions during October. First meeting October 3. Dr. Victor E. Shelford, Ph. D., Instructor in Zoölogy. Tuition, \$7.00.

GEOGRAPHY 9:—Climate and Man. The course will treat of the influence of different climatic conditions on human relations such as distribution of population, occupations, products, trade and commerce, travel and transportation, customs and habits, dress, history, diseases, and the question of acclimatization. Major. Winter and Spring Quarters. Thursdays, 4:00-6:00 P. M. First meeting January 2. Dr. Walter Sheldon Tower, Assistant Professor of Geography. Tuition, \$13.50.

CLASS WORK AT THE ACADEMY

The Academy cordially invites teachers to bring their classes to the Academy and offers to provide, whenever possible, and when it is desired by the teacher, someone to assist in conducting the lesson at the Museum.

We trust that all classes visiting the Museum will register at the office. Arrangements for special class meetings or for the use of the lecture-room or laboratory at the Museum should always be made by appointment. This may often be done conveniently by telephone, calling Lincoln 2410 and asking for the Academy office.

MUSEUM LOAN COLLECTIONS

It is the policy of the Academy to promote in all ways possible the use of the Museum collections in the public schools. The officers of the Academy are desirous of improving these collections in every way possible, and of adding such new collections as will be used. We hope to prepare additional reading-matter to accompany the collections and, if possible, to add photographic illustration to each collection.

Collections may be retained for one week from date of issue. Birds and other specimens of a fragile or delicate nature must not be handled by the pupils. Only one collection will be issued at one time, but this may be exchanged for another at the expiration of the allotted time. It is expected that the collections will be returned to the Academy in good condition. The following collections are now ready for use:

BIRD SERIES

	No. of Specimens
No. B 1. Winter Residents.....	6
No. B 2. Residents	6
No. B 3. Early Spring Arrivals.....	6
No. B 4. Birds of the Great Lakes.....	3
No. B 5. Birds of the Air.....	6
No. B 6. Summer Residents.....	6
No. B 7. Birds of Swamps.....	6
No. B 8. Birds of Shores of Lakes.....	5
No. B 9. Birds of Prey.....	4
No. B10. Seed-eating Birds.....	5
No. B11. Swimming Birds.....	4
No. B12. Wading Birds.....	4
No. B13. Six Common Birds.....	6
No. B14. Grouse and Pigeon.....	3
No. B15. Six Migrant Warblers.....	6
No. B16. Six Common Woodpeckers.....	6
No. B17. Six Common Warblers.....	6
No. B18. Six Familiar Birds.....	6

ZOOLOGICAL SERIES

No. Z19. Three Common Fishes.....	3
No. Z20. Six Common Mammals.....	6
No. Z21. Life-History of a Butterfly.....	7
No. Z22. How Insects Hide.....	7
No. Z23. Grasshoppers and Dragon-Flies....	11
No. Z24. Ants, Bees and Wasps.....	9
No. Z25. Flies	9
No. Z26. Bugs	9
No. Z27. Beetles	12
No. Z28. Lace-Winged Insects.....	4
No. Z29. Some Common Butterflies.....	8
No. Z30. Some Common Moths.....	5

No. Z32.	The Chambered Nautilus.....	1
No. Z33.	Snails of Field and Forest.....	10
No. Z34.	The Oyster and Its Relatives.....	10
No. Z35.	Beautiful Shells of the Tropics.....	7
No. Z36.	A Day with the Pond Snails.....	10
No. Z37.	Odd and Interesting Sea Snails....	8
No. Z38.	Star-Fishes and Sea-Urchins.....	7
No. Z39.	Corals	7
No. Z40.	Sea Fans and Sea Plumes.....	3

ECONOMIC SERIES

No. E32.	Petroleum Products.....	19
No. E33.	Corn Products	18
No. E34.	The Hemp Industry.....	62
No. E35.	The Wheat Industry.....	24
No. E36.	The Wheat Industry.....	24
No. E37.	The Wheat Industry (Charts)....	2
No. E38.	The Wheat Industry (Charts)....	2
No. E39.	The Featherbone Industry.....	14
No. E40.	The Featherbone Industry.....	14
No. E41.	The Pearl Button Industry.....	7
No. E42.	The Ivory-Button Industry.....	5
No. E43.	Some Common Ores.....	11
No. E44.	Artificial Abrasives.....	11
No. E45.	The Iron and Steel Industry.....	11
No. E46.	Aluminum Ores and Products.....	7
No. E47.	Coal	5
No. E48.	The Silk Industry.....	14
No. E49.	The Cotton Industry.....	11
No. E50.	The Wheat Industry.....	24
No. E51.	The Wheat Industry (Charts)....	2
No. E52.	Some Familiar Commercial Woods.	18

GEOLOGICAL SERIES

No. G53.	Eight Common Rocks.....	8
No. G54.	Some Common Sedimentary Rocks.	6
No. G55.	Some Common Igneous Rocks.....	6
No. G56.	Some Common Metamorphic Rocks.	7
No. G57.	Fossils of Rock of Chicago Area...	8
No. G58.	The Weathering of Granite.....	8
No. G59.	Crystals of Common Minerals.....	16
No. G60.	The Mantle Rocks.....	6

LANTERN SLIDES

At the urgent request of many, the Academy has undertaken to prepare several sets of lantern slides illustrating natural history and other scientific work conducted in the schools. These sets may be borrowed by a teacher or a principal upon written application. A set of lantern slides may be retained for one week. It is expected that special care will be taken of this material and that it will be returned to the Academy in good condition. The following sets are now ready:

NATURE-STUDY

	No. of Slides
No. L 1. Resident Birds.....	13
No. L 2. Winter Birds.....	12
No. L 3. Migrant Birds.....	14
No. L 4. Summer Birds.....	36
No. L 5. Foreign Mammals.....	19
No. L 6. American Mammals.....	23
No. L 7. Fresh-Water Pearl-Button Industry	25
No. L 8. Pearls and Mother-of-Pearl.....	21
No. L 9. Sponges	21
No. L10. Conservation of Forests.....	12
No. L11. Lower Animals.....	26
No. L12. Fishes and Reptiles.....	15
No. L13. Wave Work.....	14
No. L14. River Work.....	22
No. L15. Alaska	35
No. L16. Yellowstone Park.....	36
No. L17. The Coffee Industry.....	31
No. L18. Rubber and Sisal Hemp.....	25
No. L19. Some Common Trees.....	29
No. L20. Mountains	45
No. L21. Glaciers	20
No. L22. Weathering and Wind Work.....	19
No. L23. The Silk Industry.....	19
No. L24. The Cotton Industry.....	29
No. L25. The Rice Industry.....	22
No. L26. The Wheat Industry.....	54
No. L27. Truck Farming.....	18
No. L28. Dairying	36
No. L29. Corn Raising.....	24
No. L30. Hay Making.....	29
No. L31. Starved Rock.....	25

PICTURE COLLECTIONS

Many teachers have found pictures, especially stereoscopic views, of special value to them in their work, and in response to many suggestions and requests, the Academy has purchased a number of sets of stereoscopic views which illustrate topics in nature-study and physiography work. A set of views may be borrowed by a teacher or principal upon written application and retained for one week. The following sets of views are now ready for distribution:

PHYSIOGRAPHY

	No. of Views
No. P 1. Weathering and Stream Erosion...	25
No. P 2. Glaciers	25
No. P 3. Shore Lines and Harbors.....	25
No. P 4. Mountains	25

NATURE-STUDY

No. P 5. American and Foreign Mammals...	30
No. P 6. American and Foreign Birds.....	25
No. P 7. Fruits of Tropical and Temperate Climes	30
No. P 8. Domestic Animals.....	15

ECONOMIC SUBJECTS

No. P 9. The Cotton Industry.....	25
No. P10. The Iron and Steel Industry.....	35
No. P11. Wheat, Corn, and Oats.....	25
No. P12. Lumbering	25
No. P13. The Silk Industry.....	19
No. P14. Copper Mining.....	13

FRIDAY EVENING LECTURE COURSE

Beginning in October a regular series of six lectures, illustrated with stereopticon views, will be given on Friday evenings at 8:00 P. M. The program so far arranged is as follows:

October 18—"Places of Special Scientific Interest Near Chicago," by Dr. Wallace W. Atwood, Secretary of the Academy.

October 25—"Switzerland and the Alps," by Mr. Edward Marsh McConnoughey.

November 1—"The Common Butterflies About Chicago," by Mr. Frank Collins Baker, Curator of the Chicago Academy of Sciences.

November 8—"Floral Exhibits in the Academy and How to Use Them," by Dr. Herman S. Pepoon, of the Lake View High School.

November 15—To be announced.

November 22—To be announced.

Members of the Academy will receive special invitations to these lectures and will be provided with guests' tickets. A section in the lecture hall will be reserved until five minutes past eight for the members and their invited guests. The remainder of the hall will be open to the public, and at five minutes past eight all the vacant seats will be declared open to those wishing to hear the lecture.

MEMBERSHIP

Membership in the Academy is open to "any person residing in Chicago or vicinity who is in sympathy with the objects of the Academy." The Active Members constitute the governing body in the Academy and pay annual dues of Five Dollars each. Associate Members have all the privileges of Active Members except those of voting and holding office. Their dues are Three Dollars a year. A copy of each of the publications issued by the Academy is sent to all paid-up members. Special lecture tickets are also issued to members.

Application blanks may be secured from the Secretary, who will be pleased to confer with any who may become so interested in the work of the Academy that they would like to become more directly associated with it.

WALLACE W. ATWOOD,
Secretary of the Academy,
Lincoln Park, Chicago.